



Evaluation of All State Owned Land and Buildings at Hawthorn Center

Required by Section 822k of Public Act 268 of 2016

Prepared for
House and Senate Appropriations Committees, Senate and House Fiscal Agencies and
State Budget Director

Department of Technology, Management and Budget
State Facilities Administration
February 27, 2017



18471 Haggerty Road
Northville, Michigan
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Hawthorn Center Assessment



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Original Inspection – April 28, 2016
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Update to Report – February 27, 2017

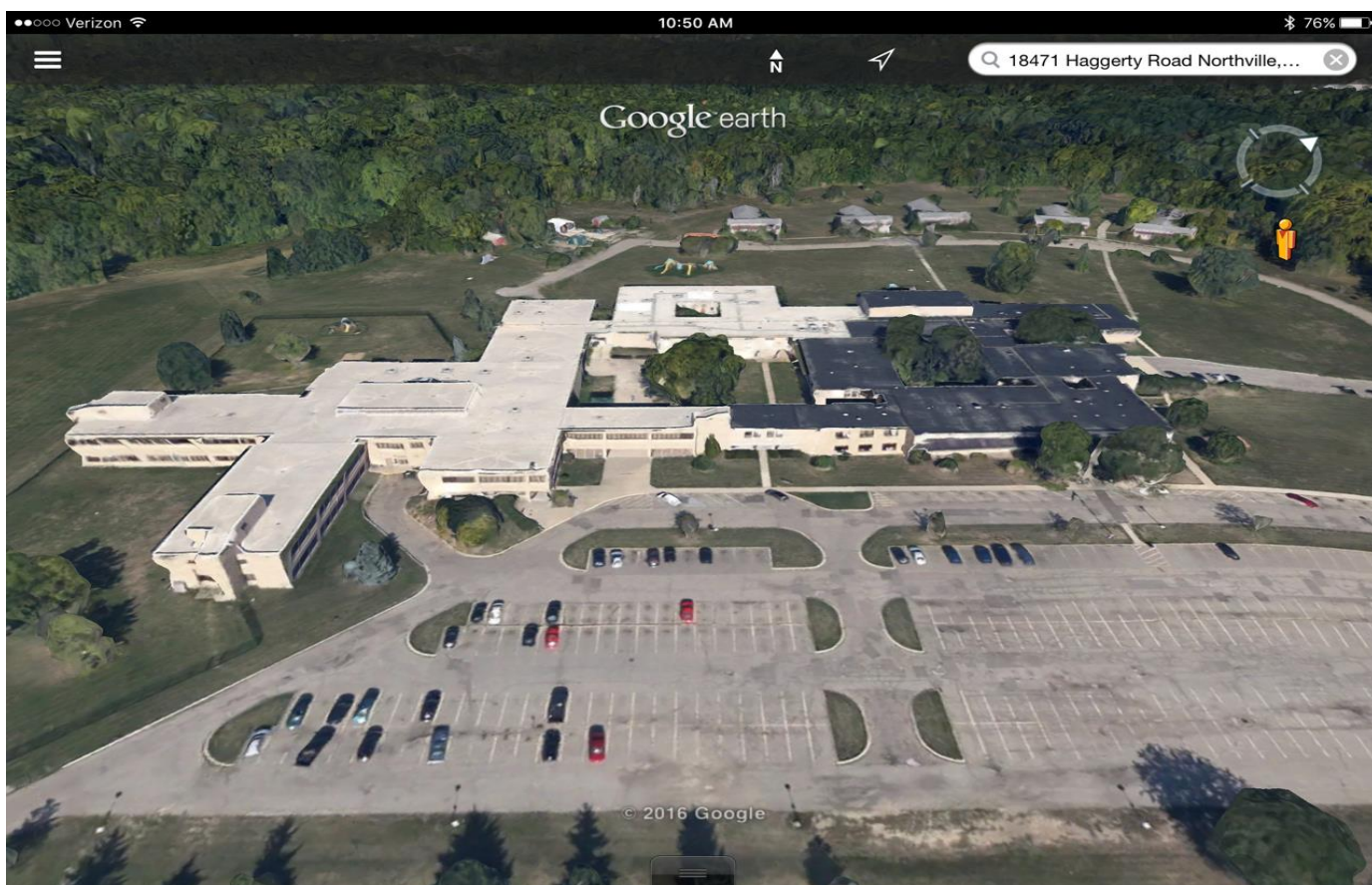
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Hawthorn Staff Attendees: Dave Dent – Physical Plant Supervisor, Kurt Warner - DHHS, Dr. George Mellows - Hawthorn Center Director, Bob Bailey - Administrator

Introduction

The Hawthorn Center was established in 1956 as a children care facility and consisted of sections a, b, c, and d, with a small gym and small pool and included five 12,000 square foot cottages. Four of the cottages were used for residents and one for offices and automobile service.

In 1964, sections e-g were added and the footprint was increased again in 1975 with the additions of sections h-m.



The Main building is a 2 story structure of approximately 250,000 square feet. Site staff indicate that only approximately 160,000 square feet of space is currently utilized. Remaining space is vacant/dark with minimal access other than hallways. In addition to the main building, at the time of inspection there were 5 “cottages” of approximately 15,000 sf each that were no longer utilized and were in a state of dangerous condition and collapsing.

These 5 “Cottages” were demolished in Summer 2016 and the area leveled/graded and no longer pose a safety concern.

From a Facilities support standpoint, there is a team of eight staff members who have this responsibility. This team includes one physical plant supervisor, one Building Trades Supervisor, two Maintenance Mechanics, one Electrician, one Painter, one Secretary and a Student Assistant. They take care of the overall maintenance of the building, heating, and grounds and use a self-designed work order system, WORQS (Work Order ReQuest System). They coordinate outside contractors for the elevator, refrigeration, fire alarms, asbestos remediation, and electrical and plumbing permit-pulling. At one point there were 26 maintenance staff when their responsibilities also included two Northville facilities and the five cottages.

Overall, the facility is supported typically by up to 210 staff. It was indicated that additional staff is needed due to the configuration of the facility and the need for additional observation.

The facility has a spending plan for 55 patients but they currently only have the capacity for 45 patients with a waiting list of another 45. Historic configuration of the residence rooms was for multiple occupancy. Today, the need is for single occupancy rooms and the current configuration does not support this.

At one time, Hawthorn was one of eight facilities throughout the state caring for children with mental health issues and is now the only remaining such facility.

A team of DTMB State Facilities Administration employees toured the Hawthorn Center on Thursday, April 28, 2016 to assess the facilities (Appendix #1 – Hawthorn Center Pictures).

Assessment

The building is operable and the staff has maintained it fairly well. However, there have been no major upgrades to the mechanical and electrical systems. These systems are antiquated (40-60 years old) and inefficient. One of the biggest challenges for the building is the design of the additions throughout the years. Each addition was planned and built without a singular operational view of the center.

The facility is comprised of a multitude of different types of single-purpose rooms including residential, one-bed sick bay, two gymnasiums, two pools, a mat room, two different types of “Fun Zones” with games, two kitchens with only one in use, classrooms, inoperable solitary rooms, nurse stations and offices. Much of the areas are not in use.

Heating and cooling is a problem throughout the entire facility. While the team toured the building, temperatures were too warm and the staff mentioned it is an ongoing concern as well as it being too cold in the winter. During extreme cold temperatures, the system is not able to keep up and temperatures inside the building are difficult to maintain. During warmer periods of the year, they are only able to cool the second floor area where patients reside. Window units are used in the rest of the center. Simply stated, the equipment in the building is old, insufficient, and managed with an out of date pneumatic controls system. This does not allow the Team to balance/manage the system that a new, functional and efficient direct digital control system would provide.

The following was observed or noted during the tour of the center:

Conditions Throughout:

- Sprinklers are only in some parts of the building. They are only in “high hazard” areas.
- Ceiling tiles discolored, painted over, ragged on edges, deteriorating, too low, and some appear to be water-damaged.
- Historically, the Team removed a significant amount of asbestos pipe insulation when they disconnected from the adjacent Northville facility, but there still remains some in the original area and center of the building. The south wing, where most patients are, is 95% asbestos free. Team has a good level of awareness regarding these materials.
- There is only one elevator in the entire facility which is a safety and ADA concern.
- Bathrooms are not current and few have been upgraded to meet ADA standards. One wing observed has only one restroom to serve 10 patients.
- Single pane windows throughout should be replaced by thermal insulated glass. Currently many windows have safety coating but they are not energy efficient.
- The roof age ranges from 6-28 years old and in various levels of condition. The older roof areas are noted to have minor leaks that will continue to deteriorate without eventual replacement.
- Given the age of the facilities, it is certain lead paint was used on the walls. Although, there is no visible evidence of exposed lead paint, lead abatement must be planned for on any renovation.

Maintenance Equipment Conditions:

- Several of the hydronic boilers have failed within 10 years of installation.
- Two sections of underground pipe have deteriorated from corrosion.
- The center is unable to provide an overall maintenance expenses because a specific budget for this has not been established or tracked. Rather, maintenance costs are included within the overall budget for the location.
- There is one main chiller that serves the bulk of the area. There is also one DX chiller that serves limited area where only one person is stationed, which is an inefficient use of energy.
- There are pinhole leaks in the galvanized pipe in part of the building that are fixed with temporary solutions. Piping system failure is imminent.
- It was reported that elevated levels of lead/copper were identified in closed areas of the buildings. However, this may be because of the lack of use of the system causing water to stagnate and absorb levels that typically would not appear if the system were in constant use.
- They still have T-12 40 watt light bulbs that they are changing over to T-8's 32 watt light bulbs. There is greater energy savings in 16 watt LEDs that could pay for itself in less than two years.
- Hawthorn staff buy energy smart appliances when new ones are needed.
- The maintenance room is pretty well organized but could be kept cleaner.
- There is a constant flow of water in the tunnel in the south wing and some water on the floor in the maintenance room. Portable sump pumps are being used to control this which is not advisable.
- There are no distance markers on the floor in the electrical room for safety and they have electrical conductive supplies in the room.
- The air handling system is missing louvers.
- The lintel over the door to the cooling towers is breaking down.
- There is massive deterioration over the tunnel in the main building and the beams appear to be in danger of collapse. Needs to be fixed and reinforced.
- There is water in the tunnels in the main building.

Patient Care Conditions:

- Because of the design of the facility, line-of-sight supervision and care of the patients is not feasible. The lack of direct sight supervision is a health and safety risk.
- Psychiatric standards only allow one Child in each room even though some are meant for double or quadruple occupancy, which results in an abundance of wasted space.

- There is no place for visitors to comfortably spend time with patients. Patients have to be brought to the small lobby or be escorted by Hawthorn care staff. There are 10-15 visitors a day and up to 50 on Sundays.
- Children have to walk to multiple areas requiring more supervision of them. The facility should be designed so recreation, service and residential rooms are closer together.
- The staff expressed concern that the facility has not been updated completely in regards to the potential for suicide. They stated the facility was not built under current considerations for suicide prevention in regards to patients utilizing fixtures rated for psychiatric care. Rooms need to be updated to eliminate areas where patients could potentially hang themselves. This must be done room by room.
- Isolation rooms are not usable because of the concrete walls that kids could bang their heads against.
- There is a problem with the Lockwood locks on most of the doors. They do not make replacement parts anymore and staff has to scavenge to fix them. The lock system should be replaced.

Cottage Conditions: (Cottages were demolished in Summer of 2016) See Picture Below:

Summer 2016:



As Assessed in April 2016:

- The five cottages – four residential and one for auto services – were abandoned in 2005 without being properly sealed/closed. Utilities have been cut off and the buildings have been allowed to deteriorate and are now failing and caving in.
- The floors and ceilings are caving in.
- Some windows are missing and some doors are open, making it accessible to anyone who tries to enter. This is a serious risk as the buildings could cave in as well as the mold and asbestos that are in the buildings.
- There is residential property within 2000 feet.
- The road to the cottages is broken and has at least one large hole that could cause harm if someone stepped into it.
- The cottages are unsafe to enter because of the threat of collapse, animal infestation, and exposed asbestos.
- These structures should be properly demolished immediately. Estimated cost \$25-30,000 each.

April 2016 – Prior to Demolition:



Kitchen Conditions:

- There are two kitchens. One that is not in service in the south wing and one in current operation in the main building. The kitchen currently being utilized is the larger of the two.
- The smaller kitchen is out of service because of drainage issues.
- All meals are prepared in the main building kitchen and transported a great distance to the residents in the south wing.
- The kitchen serves 70 now, down from the maximum of 350 at its peak.
- There are five appliances in the operating kitchen.



Recreational Area Conditions:

- There are two separate indoor pools at the location. One is a 24,000 gallon, the other is a 62,000 gallon pool which has seen some recent upgrades. Both are in good condition and used daily.
- The swimming pool mechanicals were upgraded in 2015. The pool appears well taken care of although there are some issues with some of the ceiling tiles and lighting is located above the pools making it hard for service and replacement.
- The exercise yard is newer and offers outside recreational opportunities. It is fenced in and secure.
- There is a “Mat Room” that is filled with mats and padded objects. The cabinets are in bad shape and missing doors.
- Fun Zone #1 has pinball, skee-ball, mini-basketball, puzzle boards and other games.
- Fun Zone #2 is a room for video gaming.
- There is a fitness room with treadmills, elliptical machines, and other equipment.
- Locker Room – Need to pull out lockers because of the ligature risk. They want to replace them with snap-away equipment.

South Wing Conditions:

The south wing is where the bulk of operations and care take place. All patients reside in this wing and the majority of services are provided there. However, it is a sprawling, non-centralized wing with a labyrinth of hallways. Most of the conditions are remarked on in other sections of this report; however the following also needs to be noted:

- Loading dock is small and awkward to access and the concrete is deteriorating on the platform.
- Sick bay (room L-109) is a single bedroom without needed space or amenities. It is the only room with its own bathroom.
- There is 34 inches above the ceiling.

Grounds Conditions:

The grounds are well maintained by the Hawthorn maintenance staff. There are two freight containers used for storage. They would be better served, aesthetically and functionally, by pole-barns or unused areas of the building.



Main Building Conditions:

- The main building was built in 1953 and, before they largely stopped using the section, had offices, residential rooms, and classrooms.
- The Hawthorn staff report that lead has been detected in the water. However this may be caused from lack of continuous use. A comprehensive test with remediation recommendations should be conducted.
- Because of health risk concerns, the main building is not used for patient care; however, the kitchen is still located there and the facilities secretary works in the building.
- The humidity level caused the gym floors to buckle, which they repaired.
- Bathrooms are too small or have the wrong footprint to meet ADA requirements.
- There are ligature concerns throughout the section.
- Seclusion room is not safe because the walls are too hard and the ceiling is too low.
- The drain in the bathroom is higher than the rest of the floor and is not functional.
- The ceiling is too low in Hallway C.
- The hallways are not wide enough for safe egress.

Safety and Health Concerns:

There are many safety and health issues throughout the facilities:

- They are unable to adequately heat and cool spaces during extreme temperatures.
- Lead was discovered in the water in the main building due to leeching from the lead in the solder in the copper joints.
- Lintel by cooling towers is disintegrating.
- There are breaks and disintegration in some of the sewage lines, which could lead to floors collapsing.
- Cottages are abandoned and roofs and floors are falling in. They also contain asbestos and lead. Since they are not boarded up, they are easily accessible to the neighborhood. Residents are within 2000 feet.
- Many doorways, hallways and bathrooms are not ADA compliant.
- Ceiling by tunnel in the mechanical room in main building is deteriorating and is in risk of collapsing
- There is no line of sight for patient care.
- Asbestos-containing building materials and mechanical insulation were identified throughout the complex. There are several areas where asbestos is exposed and damaged.
- Sprinklers – The fire sprinkler system is only in limited areas deemed critical. It should be throughout all areas of the buildings.

Appraisal

DTMB tried to find reasonable comparable land sales in the area of the Hawthorn Center to provide an estimated value. However, there were no recent, large, unimproved land sales that could be used for comparison in this vicinity.

Because the Hawthorne Center is a larger parcel, located in a highly desirable area, it seemed reasonable to place the most weight for an opinion of value on the appraisal that DTMB had completed on the former Scott Correctional Facility in November 2014. The Scott property is a 53.39 acre parcel that appears to be vacant, however the buildings were demolished only to ground level, with the footings still intact below surface level. The Scott parcel is on the northwest corner of 5 Mile and Beck Roads, and could be argued to be not as desirable as the Haggarty and 7 Mile location, however it is still Northville Township and in our opinion the best comparison available without an appraisal. The Scott property appraised for \$8,200,000. It is our opinion that the Hawthorne property could be expected to be sold for that amount, or more, assuming the Buildings are demolished to at least ground level.

In discussions with a known appraiser in the area, he felt that the size of the property may work against maximizing its value, so we may want to utilize sale strategies to maximize the sale price. This could include dividing the property and

selling smaller parcels or other methods. To accurately estimate its value will require a highly skilled appraiser. To appraise the value of the land only would cost approximately \$10,000.

Summary

The Hawthorn Center is in fair shape. It could feasibly be renovated and continue to operate. However, it would remain a poorly functioning facility.

The biggest challenges of the center are:

- The equipment is too old or insufficient.
- It isn't designed for today's standards of mental health care and safety.
- The abandoned areas pose safety threats.
- The footprint is too large and spread out. With only 60% of the center in use and the services scattered throughout, there is too much wasted space to maintain and the care staff often serve as escorts instead of care givers.

The equipment can be replaced, the system can be upgraded, and the abandoned cottages could be demolished – all at considerable costs. However, the center would still not facilitate optimal patient care. Because of the lack of open areas and the distance between services, the staff is reportedly stretched thin because they have to escort patients to the different rooms. The layout of corridors prevents constant observance of all patients. A central layout would allow staff to maximize their efforts and give care and attention to more patients while also enabling the maintenance crew to focus on used space instead of maintaining a building approximately twice the size needed. Furthermore, a redesigned facility could maximize space for patient rooms, while improving their conditions, and giving space for more rooms to handle the backlog of patients needing care. The Hawthorn Center staff recommends an 80-bed facility with a treatment team station in middle with all residential rooms and services orbiting the treatment station.

If the decision is made to maintain services in the current facility instead of building a new center, the State Facilities Administration recommends the following essential actions:

Abandoned cottages - NOTE: Demolished Summer 2016. These pose an imminent threat to anyone who may enter the buildings and must be demolished to eliminate the risk. Each building would cost approximately \$30,000, or \$150,000 total. Costs may be higher depending on level of asbestos and the remediation required.

Controls system: The center currently uses a pneumatic building controls system, which is out of date and does not offer adequate heating and cooling controls. This should be upgraded to a direct digital controls (DDC) system with the addition of frequency drives that would enable proper heating and cooling controls and diagnostics. The estimated cost of installing a DDC system is \$1.5 million dollars but typically earns a payback in 12 years because of increased efficiencies. Although this is a long-term payback, it is essential for proper climate control and to avoid health risks associated with extreme temperatures.

Air handlers: Need to purchase and install 10 air-handlers with a centralized boiler and chiller. Estimated cost is \$15 million. Again, this is essential to heat and cool the facility.

LED lights: The center is currently using 40-watt T-12 fluorescent light bulbs and began switching over to 32-watt T-8 fixtures. We recommend the installation of 16-watt LED bulbs, which usually get a payback in under three years. Estimated cost is \$1 million.

Lead abatement: The Hawthorn staff state traces of lead have been detected in the water in main building. A comprehensive water test with recommendations for remediation should be conducted throughout the facility and it should be flushed periodically to eliminate contaminants due to water stagnation.

Lintel repair: The deteriorating lintel over the entrance to the cooling tower and especially over the tunnel entrance in the main building must be repaired as it could cause a collapse of the main building entrance. In addition, an I-beam should be placed as support under the deteriorating beam above the tunnel entrance. Estimated cost is \$15,000.

Replace door-locking system: The current system is no longer supported and will eventually lead to an unsecure facility when they are unable to repair locks. We recommend the installation of a new locking system. Cost estimate is \$200,000.

Sewage lines: The staff reports there is disintegration in the sewage lines, which is causing drainage issues and could lead to floor collapse. The drains need to be scoped for specific location and assessment. This would require major floor demolition and reconstruction. Cost unknown as it is dependent on the level of repairs needed.

ADA concerns: There are many areas throughout the facility that do not meet the current ADA standards. However, unless major renovations are made, the facility is not required to adhere to the current guidelines. If renovations are planned, adherence to the most recent ADA standards must be part of the design and financial planning. Cost unknown.

Asbestos abatement: Pipe insulation was observed where suspected ACM (Asbestos Containing Materials) was in a very poor and potentially friable condition and we suspect ACM in some of the floor tiles. It is recommended that an inspection be performed to determine current quantity and condition of all ACM. Any and all damaged/friable ACM that has been identified should be properly removed/encapsulated by a licensed abatement contractor under the supervision of a licensed third party Industrial Hygiene Consulting firm. Costs would be based on the amount of asbestos detected and abated.

Fire sprinkling system: The fire suppression system is only in critical areas of the center. Per current NFPA codes, any renovations must incorporate the inclusion of a fire suppression system.